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ABSTRACT

California's Education Code establishes the goals of distance learning to be to ensure equal access; enhance the quality of education through telecommunications; and ensure efficiency and accountability. In California community colleges, state-supported distance education coursework is limited to credit, transferable courses and is governed by Title V regulations established by the Board of Governors. These regulations establish requirements regarding faculty input, course transferability, equivalent academic standards, and class size. In addition, the regulations define distance learning and address issues including quality determination by faculty; reading, writing, and personal contact, separate course approval; and faculty selection. The regulations were developed and agreed upon following prolonged discussions, primarily with the University of California, to preserve course transferability; however, staff of the Chancellor of California's community colleges and others feel there are reasons for pursuing regulatory changes. This paper describes the current conditions under which state-funded, distance learning occurs within California's community colleges. It identifies external forces (i.e., the California State Assembly, the California Postsecondary Education Commission, the California State Legislative Analyst's Office, and the CCC Board of Governors' Commission on Innovation) and internal forces (e.g., focused national educational efforts to profile distance education students, deal with ethical considerations of access, and provide for faculty development and planning) influencing the debate on expansion of distance learning in higher education. The paper highlights National Education Association Policy recommendations and reviews research on the advantages and disadvantages of distance learning, faculty resistance, institutional priorities, personalized student-teacher contact, and good practice in undergraduate education. (PAA)

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ED 364 282

DISTANCE LEARNING IN CALIFORNIA'S COMMUNITY COLLEGES:

An Academic Senate Review of the Social, Fiscal, and Educational Issues

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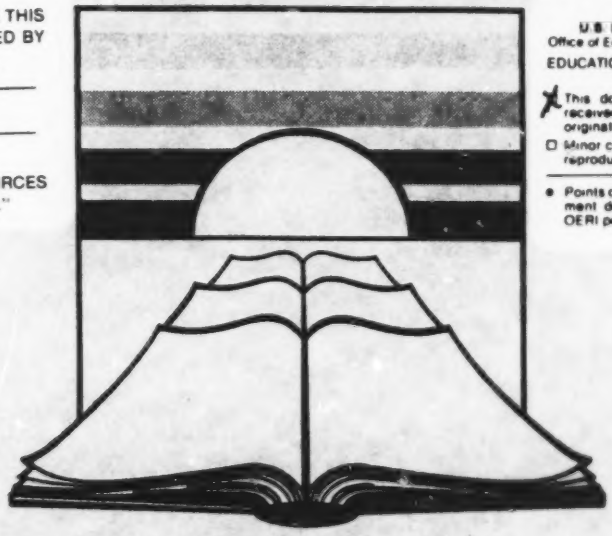

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The Academic Senate for California Community Colleges

JC 930 549

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DISTANCE LEARNING IN CALIFORNIA'S COMMUNITY COLLEGES: AN ACADEMIC SENATE REVIEW OF THE SOCIAL, FISCAL, AND EDUCATIONAL ISSUES

I. INTRODUCTION

Stimulated by a variety of both external and internal forces, the Chancellor's Office of the California Community Colleges initiated a statewide discussion of proposed revisions to current regulations designed to expand state support to (a) non-credit courses; (b) non-degree applicable credit courses; and (c) non-transferable, degree-applicable, courses offered in the distance learning mode. In the most basic sense, this refers to learning situations where the instructor and student are not in the same physical location. Community college basic skills courses constitute the major portion of courses which would be affected by the proposed change in regulations. However, courses in certificate and degree based vocational programs as well as other types of non-transferable courses would also be affected.

This paper describes the current conditions under which state funded, distance learning occurs within California's community colleges. It identifies external and internal forces influencing the debate on expansion of distance learning in higher education. The paper highlights important research findings from the higher education community which are relevant to the ongoing debate and to a proposal which suggests a change in community college distance education regulations.

The Academic Senate will consider, at the Fall 1993 Session, a community college faculty position on the critical components necessary to the development of distance education policies which are socially equitable, educationally responsible, fiscally efficient, and outcomes-based.

We invite local senates to distribute and discuss this background paper and the companion draft of recommendations on the expansion of distance learning regulations in the community colleges so that all local concerns are considered in the final Academic Senate position.

II. DISTANCE EDUCATION LAW AND PRACTICE

A. CALIFORNIA EDUCATION CODE

The California State Legislature established the following policy objectives pertaining to distance education with the enactment of Education Code Section 51865:

Distance learning should be utilized to achieve the following goals:

(1) ensure that every pupil and adult in the state has equal access to educational opportunities;
(2) enhance the quality of education through the creative application of telecommunications; and
(3) ensure efficiency and accountability in the transmission of services and information.

A coordinated distance learning system should be developed to meet the needs for:

(1) work force skills for adults;
(2) classes in English as a second language;
(3) curriculum for at-risk students;
(4) course offerings to rural and inner-city schools;
(5) university-level courses at community colleges and off-campus centers;

(6) staff development for elementary, secondary, and community college teachers;
(7) increased communication capability between educational institutions, business and industry, and government.

This legislative policy statement gives recognition to the value of regional networks serving regional needs; places emphasis on the delivery of education and training services to populations currently not receiving services that distance learning can provide; urges that incentives be employed to encourage educational institutions to expand their utilization of distance learning technologies; and establishes that traditional academic standards be applied to distance learning for course and program quality, content, student achievement levels and coherence of curriculum.

B. CALIFORNIA COMMUNITY COLLEGE TITLE 5 REGULATIONS

In the community colleges, state-supported distance education coursework is limited to credit, transferable courses and governed by Title 5, Subchapter 4, Articles 1 and 2, Section 55300 - 55380 regulations established by the Board of Governors of the California Community Colleges. Currently classified under the general heading of "Courses and Programs Conducted as Independent Study", courses offered as independent study, including telecourses require:

Faculty Input

"In the development and evaluation of courses and programs subject to the requirements of this chapter, the district shall include input from, and participation by, faculty who are selected by academic senates or appropriate faculty bodies, and students." (Title 5, Section 55314)

Course Transferability

(a) Be accepted by the college toward completion of an appropriate educational sequence leading to an associate degree, and (b) Shall be recognized by an institution of the University of California or the California State University upon transfer to that institution. (Title 5, Section 55316)

Equivalent Standards

Academic standards shall be the same as those applied to other courses in the college. (Title 5, Section 55320)

Course Size Restrictions

Course sizes assigned to any one instructor "shall not exceed 125 students per instructor unless exempted by the Chancellor" (Title 5, Section 55352)

Telecourse Definition

"Telecourses are courses or sections in which instruction is delivered over distance and in which a significant portion of instruction is delivered through electronic technology such as one of the following:

(a) open broadcast, cable, or low power television;
(b) instructional television fixed service;
(c) radio;
(d) computers, when linked over distance;
(e) integrated broad-band communications; and
(f) video and/or audio cassettes. (Title 5, Section 55370)

Quality Determinations by Faculty

"The same standards of course quality shall be applied to telecourses instruction as are applied to traditional classroom courses..." (Title 5, Section 55372)

Course quality judgments are to be made "with the full involvement of faculty in accordance with" sections commencing with 53200 regulations [see note below]. (Title 5, Section 55374)

NOTE: Title 5, Section 53200 regulations are those adopted by the Board of Governors to meet the uncodified AB 1725 mandate to strengthen local academic senates. Among other academic and professional matters identified as within the purview of local academic senates, this section identifies curriculum, educational program development, program review and processes for institutional planning as areas where district governing boards "shall" develop policies which either (1) rely "primarily upon the advice and judgement of the academic senate" or (2) "reach mutual agreement" with the academic senate.

Reading, Writing, Personal Contact

Title 5, Section 55376 requires that:

"district governing boards shall ensure that:

(a) Each telecourse shall include the use of appropriate texts, supplemental assigned readings, and/or enrichment materials and activities including examples of reading and writing assignments as required by section 55002(a) and (b).

(b) Each telecourse shall include regular personal contact between instructor and students through group or individual meetings, orientation and review sessions, supplemental seminar or study sessions, field trips, library workshops, telephone, correspondence or other in-person activities. Personal contact may be supplemented by telephone contact and correspondence.

Separate Course Approval

Title 5, Section 55378 (1) requires colleges to perform a separate course approval:

"Each proposed telecourse section including a section of an existing course when offered via telecommunications, shall be separately reviewed and approved, according to the district's certified course approval procedures whether or not the course is already approved to be offered in a traditional classroom setting"

This section also exempts such reviewed courses from a separate approval by the Chancellor's Office.

Faculty Selection

Title 5, Section 55380 addresses the issue of faculty selection:

"Instructors of telecourses shall be selected by the same procedure used to determine all instructional assignments"

"Instructors shall possess the minimum qualifications for the discipline into which the telecourse's subject matter most appropriately falls"

C. CALIFORNIA HIGHER EDUCATION INTERSEGMENTAL AGREEMENTS

The current community college regulations on telecourses were developed, and agreed upon, following prolonged intersegmental discussions (primarily with the University of California) in order to preserve telecourse transferability and avoid a University request to have telecourse sections identified on community college students' transcripts and deflecting the University's movement toward the establishment of a separate course transferability assessment by the University for each course "section" taught by the telecourse mode in California's community colleges. Any proposed changes in these regulations would certainly require reopening discussions with the senior transfer institutions so as to not jeopardize the transferability of these courses and/or reopen the senior institutions' concerns about telecourses and their quality.

This concern was recently reiterated in a letter to Vice Chancellor Rita Cepeda from Robert Blattner, 1992-93 Chair of the U.C. Board of Admissions and Relations with Schools (BOARS) regarding the proposed regulatory changes. While he suggests that many of the changes are "real improvements, in our opinion" he goes on to suggest:

"However, we do have fundamental concerns about the changes in Section 55376(b), which deals with contact between instructional personnel and students. It has been the judgement of BOARS since it first began to consider the question of transferability of telecourses some years ago that regular personal contact between instructional personnel connected to the telecourse and students in the telecourse is essential to the student getting full benefit form the telecourse. Indeed, this is the case for all courses, in our view. BOARS believes that personal contact may be supplemented by, but should not be entirely replaced by, such electronic means as e-mail or electronic bulletin board (the latter is a particularly impersonal medium)."

Dr. Blattner also suggested in this letter that, "In any case, BOARS and representatives of the Community Colleges Chancellor's Office and Academic Senate should probably meet further in order to come to some mutually agreeable solutions to this important matter."

D. CALIFORNIA COMMUNITY COLLEGE SYSTEM STAFF OPINION

Chancellor's staff in a presentation to the Academic Senate at the 1993 Spring Session, while acknowledging that there has been essentially no (published) California based research on distance learning focused on community college students, listed the following reasons for pursuing a regulatory changes:

1. the current regulations produce a limited opportunity for faculty to provide leadership in the development of new teaching methodologies that use educational technology for delivery;
2. there are large numbers of students that cannot find a seat in any course on community college campuses;
3. there is a large, unmet demand for certain courses in the curriculum, e.g., ESL, non-transferable general education courses, etc.;
4. that students are prevented from improved learning opportunities that high technology provides; and
5. that many students are unable to access instruction at times and locations more convenient to them than current campus locations and scheduling permit.

E. STATUS OF CALIFORNIA COMMUNITY COLLEGE DISTANCE LEARNING

In August of 1992, Chancellor Mertes, in order to honor a commitment made by his office to representatives of the University of California, reported to local districts the Board of Governors action which defined standards for the design, approval, and conduct of courses delivered over a distance through electronic technology (telecourses). Regulations on this matter had gone into effect on May 4, 1992.

The Chancellor discussed the substantive intersegmental discussions which led to these regulatory changes and led to this action in order to maintain the quality of telecourses needed to assure their eligibility for transfer.

The Chancellor pointed out that the regulatory language requires:

1. full faculty involvement in the determination of telecourse quality;
2. selection of telecourse instructors through the same procedures used to determine all instructional assignments;
3. some in-person contact between instructors and students for every telecourse;
4. separate review and approval of every new telecourse through the local curriculum committee process; and
5. assurances that existing telecourses which have never been separately reviewed and approved would undergo review and approval.

Each college was requested to establish a date by which all existing telecourses approved before 5/4/92 would be reviewed. Because of the requirement to review programs once every five years, the Chancellor suggested that the date should not exceed 9/97.

In July 1993, the Chancellor's Office sent a reminder to colleges which had not notified them on the college's plans for complying with the telecourse review requirements by the deadline of Sept. 30, 1992.

The following is a summary of the Chancellor's Office file materials on this issue up to September 23, 1993:

1. 53 (49%) colleges submitted letters and indicated they currently offer telecourses;
2. 21 (19%) colleges submitted response letters, offered no telecourses and/or indicated they were planning to discontinue offering them;
3. 5 (4.6%) colleges submitted letters, were not offering telecourses but were exploring the possibility of offering them;
4. 30 (27.5%) colleges did not respond, or at least have a response in the file materials provided to the Academic Senate, to the Chancellor's request.

III. NON-EDUCATOR-BASED EXTERNAL FORCES

During the 1992-93 year, a variety of bodies composed of non-educators and external to the California community college system considered recommendations relative to the distance learning issue. The following summarizes some of these considerations.

A. CALIFORNIA STATE LEGISLATURE

Within the Legislative arena, the Assembly Committee on Higher Education (ACHE), the California Postsecondary Education Commission (CPEC) and the Legislative Analyst's Office (LAO) considered or made recommendations on this matter.

1. CALIFORNIA STATE ASSEMBLY

In an extensive series of consultation meetings and public hearings during 1992-93, the Assembly Committee on Higher Education, chaired by Assemblywoman Marquerite Archie-Hudson of Los Angeles, considered a wide variety of proposals in their "Focus on the Masterplan." Although a final report has yet to be produced, indications are that the committee's recommendations will include some in the distance learning, technology-mediated area. Among the proposals related to the distance learning issue that were discussed in the 1992-93 year and expected to be considered for 1993-1994 legislation were the following:

1. require distance learning agreements to allow community colleges to teach high demand, lower division courses to UC and CSU students;
2. require distance learning agreements to allow intersegmental general education courses agreeable to UC and CSU;
3. develop coordination between segments such that course and program reductions could be addressed by distance learning in cooperation with other public or private institutions;
4. require the development of agreements between UC and CSU for intersegmental, systemwide agreements on course offerings not available on individual campuses to be available via distance learning; and
5. require all segments to provide selected course offerings statewide by cable TV.

Requested to respond to the initial drafts of the Assembly Committee's considerations, the Executive Committee of the Academic Senate drafted the following statement of concerns about their instructional innovations proposals:

"The Executive Committee is concerned over an apparent trend toward "innovations" which emphasizes technology for its own sake and which honors the corporation more than the academy. Hence, the senate recommends the following criteria for technological innovations.

a. - Innovation should always serve the best interests of students. The maintenance of educational quality is in the best interests of students. Access to inferior learning opportunities is not access at all. In particular, the effect of these high-tech solutions on at-risk students and especially students from historically underrepresented groups who, according to all the research, benefit from contact and involvement with the institution and its staff well beyond what we offer as we currently operate. Such students would be the victims of many of the technological proposals.

b. - Innovation should be initiated by faculty when it enhances student success. Outside pro-technology forces, with financial interests in "innovation," ought to be resisted. Innovation may not be less expensive and should not be employed for its own sake. Indeed, the technologies that have the most promise in educational are expensive. What is inexpensive is the pre-taped show where the student's only interactions with the instructor are tests and other graded assignments and the opportunity to make a telephone call to someone if the student has a question. Such television courses are certainly not innovative and have many disadvantages and offer little promise for the future.

c. - Students gain enormously from being part of a campus. The exposure to other students and the opportunity to interact with students and faculty from many backgrounds. Higher education prepares the body politic to be politically and economically functional in a socially just, democratic society. These experiences foster cooperative learning, appreciation of diversity, critical thinking skills, close instructor monitoring, and practice in democracy."

2. CALIFORNIA POSTSECONDARY EDUCATION COMMISSION

The California Postsecondary Education Commission recommended the increased use of educational technology to deal with the state's fiscal crisis, suggesting that:

This option offers the potential of accommodating larger numbers of students without expanding the number of faculty employed; the ability to provide instruction to students located in remote areas without building new campuses or educational centers; the ability to offer instruction in certain disciplinary areas without hiring new faculty; and the ability to provide instruction at any hour of the day or week.

The CPEC report suggests that they found:

> A review of the literature on the effectiveness of distance learning indicates that it is as effective as on-site, face-to-face instruction in the classroom for some courses. Many teachers and students also believe that interpersonal contact between the teacher and the students is actually enhanced, since this relationship in a distance learning model requires more of an effort.
>
> CPEC sounds precautionary warnings, however. with the following:
>
> The Community College of Maine discovered two areas of concern, that of the provision of library services for off-campus students, and faculty orientation and participation.
>
> The Virginia Community College program found that (1) their open enrollment, self-paced arrangement has created challenges in the academic/student support services area; and (2) procrastination among students in completing coursework has been problematic, and the attrition rate in their program has been over 50 per cent.
>
> Finally CPEC warns that when investing in telecommunications infrastructures, consideration must be given to whether there is a critical mass of users to support the cost of the new services and the significant costs of maintenance and upgrading of the technologies being used. They also suggest that distance learning programs commonly recognize the need to compensate faculty for the extra time required to make contact with distance learners and grade exams.

3. CALIFORNIA STATE LEGISLATIVE ANALYST'S OFFICE

> The California State Legislative Analyst's Office (LAO), during the 1993-1994 budget discussions, made a formal suggestion to the Legislature that the University of California, the California State University, the community colleges and CPEC be required to report during the budget hearings on efforts to manage course options and use educational technology. However, they also recommended that the total funding for educational technology be suspended for one year, an action which was widely believed to threaten most existing programs.

B. CALIFORNIA COMMUNITY COLLEGES BOARD OF GOVERNORS' COMMISSION ON INNOVATION

Although established by the Board of Governors of the California Community Colleges, the "Community College Commission on Innovation" is composed primarily of business leaders and has no community college representatives on the commission. Three "Task Forces" of community college leaders marginally participated in providing the Commission recommendations in the area of Facilities, Instruction and Governance. These commissioners are currently considering a more extensive set of recommendations produced by the paid consultant firm of Berman, Weiler, Associates, of Berkeley, California. Summarized below are the consultants' options and/or recommendations related to distance learning currently being considered by the Commission:

1. establish an Institute for Distance Education and Telecommunications within the Chancellor's Office to assist and monitor a decentralized delivery system;
2. remove current restrictions against non-transferable telecourses;
3. remove or adjust the enrollment cap to a higher level just for telecourses and compensate them at a lower rate than traditional classroom courses;
4. remove or adjust the enrollment cap to a higher level just for telecourses while using same rates;
5. require the Board of Governors to disallow any facilities construction until a particular level of total FTES was delivered by telecourses;
6. require the Board of Governors to set targets for the percentage of FTES that should be delivered at a distance and compensate colleges that meet the targets;

7. keep distance learning decentralized; and
8. compensate telecourses at a lower rate than traditional classroom courses.

C. HIGH TECHNOLOGY INDUSTRIES

There can be no reasonable doubt that purveyors of high technology equipment and services are one of the forces behind the expansion of distance learning and other technology-mediated instruction. It is likely that their efforts will continue to influence, if not drive, the future direction of education in the United States. Marketeers of high technology have forthrightly identified higher education as a growth market over the next two decades, and will be exerting more economic and political pressure to increase the use of technology in instruction.

IV. EDUCATOR-BASED FORCES

A. FOCUSED NATIONAL EDUCATIONAL EFFORTS

Student Profile

The Corporation for Public Broadcasting/Annenberg Project research project developed the following telecourse student profile:

1) over 26 years of age;
(it is interesting to note that the British Open University requires that students be at least 21 years old, having found that 18-year-old are not sufficiently mature. Moore, 1993)
2) highly motivated;
3) goal oriented; and
4) unable to attend the traditional classroom setting.
(Brey, et. al, 1988)

An Annenberg/CPB project entitled "New Pathways to a Degree" which is administered by the Oregon Higher Education System, Indiana University, West Virginia Higher Ed System, the Community College of Maine, Northern Virginia Community College and Rochester Institute of Technology produced a first year report which described how each of the projects:

1) has enhanced the institution's outreach into the community;
2) served as a catalyst for faculty renewal;
3) attracted new and previously under served groups of students; and
4) demonstrated how factors such as student motivation and faculty preparedness have had far greater impact on student performance than factors of course delivery and technology.

Duning, et al (1993) in their "Reaching Learners Through Telecommunications, a publication in the Jossey-Bass Management and Leadership Strategies for Higher Education Series, found that: "early attempts at introducing telecommunications-based education typically identified a relatively narrow clientele with specific needs. Academic or professional certification offerings were often viewed as the safest starting point. Yet in many environments, this may not be the best initial use of telecommunications-based education. Depending on the circumstances, a response to educational needs where learners are not seeking academic credit may be the best place to start".

While the body of research contains more studies on the social effects than the cognitive effects and more studies focused upon the influence on young children than adolescences and adults, all agree that for academic subjects video is unsuitable as the sole medium of instruction (Moore, 1993). The substantial differences among students in their abilities to comprehend information presented by

different media argues for incorporating video as a component in a mixture of media. Pedzek, et. al. (1987), in a cognitive research project, documented, for example that subjects with high visual/spatial ability comprehend television better than people with weak visual ability.

Ethical Considerations of Access

Duning, et. al, (1993) comprehensively address the integration, implementation, and maintenance of telecommunications-based education in organizations and institutions, the authors warn managers that they absolutely must address the ethical dimensions of the development of such programs stating:

Ethical considerations are becoming a high priority in the development of telecommunications-based education. Postsecondary education will feel the impact of the perception that only a narrow range of learners has access to education and training. The primarily middle-class, white, urban, and education character of participants in both traditional and nontraditional educational programs is increasingly viewed as an ethical issue by underrepresented groups. The greater the perceived imbalance, the more insistent the ethical questions will become.

Inequities will not be framed solely as an educational issue. They will increasingly be viewed as exemplifying racism, social control through differential access to resources, and discrepancies between organizational values and organizational behavior.

Whereas accessibility to educational resources is one of the most commonly employed rationales for the introduction of telecommunications-based education.; it is important, however, to ask: accessibility to whom? (Duning, et al, 1993)

Duning, et al (1993) also discuss the fact that organizational integrity forces individuals and organizations to address issues of quality and equity. Organizational values of inclusiveness meet head-on with the reality that unequal participation currently exists in continuing and alternative forms of education and training. They question the vocabulary of telecommunications-based education managers and its relevance in a multicultural society; stating that "we suggest that it may, in fact, have the intended effect of leading us to serve the same relatively narrow audience, which is less and less reflective of the makeup of our wider society.

Duning et. al (1993) assert their research shows that in post secondary education "the composition of the adult audience that is served by nontraditional programming, in general, has been essentially the same for decades: urban, middle-income, Caucasian, well educated, and more recently, female." They suggest that introducing even modest goals to alter the composition of the learners who participate in telecommunications-based education will lend credibility to its promised access and conclude with a warning that what we choose not to measure clearly indicates which outcomes are less valued.

Faculty Development

The "Western Cooperative for Educational Telecommunications" established in 1989 by the Western Interstate Commission for Higher Education has continued to explore aspects of their charge "to strengthen the efficiency, impact, and quality of educational telecommunications systems and programs." They have published an extensive "Faculty Resource Guide to Distance Education" (No. 2A205, 1991, $27.00, P.O. Drawer P, Boulder, Colorado, 80301-9752) which contains information on strategies for faculty development activities directed at the topic of distance education via technology. Topics range from the role of faculty development in distance education and instructional design to support services and research and evaluation.

Planning Issues

The Western Cooperative has also produced a document which outlines the foundation building, key questions which an institution needs to answer relative to institutional mission, external and internal environments, and academic issues before they consider adding new technologies for distance education. ("Telecommunications and Distance Education: A Guide for Proposal Development", No. 2A220, 1991, see above).

Duning, et al, (1993) in their discussion of the planning for telecommunications-based education suggest that they have found that managers say, in retrospect, they would do some things differently. In particular they would give more attention to:

"1. Ensuring congruence with the parent organization's mission and its rewards to faculty when the new system is introduced;
2. gaining faculty cooperation;
3. clarifying the primary users of telecommunications-based education and their needs, expectations, and locations;
4. Identifying all stakeholders in the educational telecommunications system and determining how best to keep them informed of developments;
5. Determining the specific responsibilities of each partner in the new system's management;
6. Probing the expectations of industry partners thoroughly;
7. Developing learner-support services, in particular the on-site coordination of program support in the form of materials, counseling, and logistics;
8. Specifying sources of expense and income and predicting how they are likely to change over time."

In reviewing a case study of the development and implementation of the University of Colorado's, legislatively mandated and funded, program for delivering complete, graduate-degree programs state-wide to public school teachers and educational administrators, Duning, et al (1993) identify the three elements which are were believed critical to success:

1. faculty development and faculty commitment;
2. a feeling of familiarity and comfort with a new way of doing things throughout the organizational unit and the parent organization;
3. an infrastructure that implements the educational telecommunications system.

In addition the Colorado effort identified the following strategic planning issues:

1. potential student market;
2. possible programs;
3. service area;
4. potential competition;
5. most appropriate electronic technology;
6. costs

Duning, et al (1993) point out that "It is tempting to consider the wholesale adoption of a successful system from another organization. Experience has shown, however, that systems should be uniquely designed for the organization within which they will be used. A manager can only be confident of proceeding with the implementation of a specific system after completion of a systematic development activity such as strategic planning in the end, the new system may look remarkably similar to the one envisioned before the planning Nevertheless the refining and confirming experience of a detailed planning process will legitimize the design for the manager and others in the organization".

QUALITY

According to Duning, et al (1993) The National University Continuing Education Association (NUCEA) and the National University Teleconference Network (UNTN) have attempted for a number of years to specify the meaning of quality in telecommunications-based education. The latter has adopted a set of standards for video conferencing. NUCEA continues to strive to reach agreement on broadly applicable guidelines for good practices in telecommunications-based postsecondary distance and continuing education. These efforts have not resulted in a widely accepted set of standards.

Despite the need for knowledge and guidance, and the emotional nature of the subject of quality, Duning, et. al (1993) point out that "relatively little basic research has been done on measures of effectiveness either in telecommunications-based education or in nontraditional, distance, or continuing education, nor is there agreement on what those measures should be."

Duning, et al recommend that quality can be considered at the functional, managerial, and ethical levels. They suggest that establishing standards that operationalize the institution's values through measures of program outcomes will allow managers to anticipate issues. They also suggest that there are clusters of interest in quality including:

1. learner satisfaction with the method of instruction;
2. learner achievement (which in nontraditional education has not been found to be related to satisfaction);
3. the presence of a site facilitator and appropriate, functioning equipment;
4. teaching behaviors;
5. effectiveness measures relating to costs;
6. learner-faculty attitudes;
7. technical quality; instructional feedback;
8. levels and types of learner interaction in the instructional context; and
9. the extent to which learner autonomy and independence are supported.

Success should be distinguished from quality. For example, if a program admits only those who graduated at the top of their class, it is likely that all learners will complete the program and do so with high grades. As measured by completion, the program is successful. Do its outcomes reflect quality? If serving diverse learners is specified as a mark of quality, the reported success of the program must be tempered by other measures of quality that have not been met.

COSTS

Duning et al (1993) warn that "reliance on student fees also ties activities to short-term considerations that color a manager's view of what constitutes an acceptable risk. Educational programs that are expected to generate revenue must take daily risks, risks linked to the premise that individual fees must cover all direct and indirect program costs. This orientation is insufficient as a fundamental approach to putting telecommunications-based ed on a firm financial basis. Thus other alternatives to cushioning risk need to be introduced, including efforts by managers to lead the parent organization toward new thinking about cost recovery for programs that have traditionally been self-supporting."

STATE POLICIES

The Western Cooperative has observed and recommended that if those states who are investing resources in this area are to fulfill the potential of their investments they will, at the state level have to:

1) change existing educational and financing policies;
2) restructure educational relationships; and
3) provide additional resources.

B. NATIONAL EDUCATION ASSOCIATION POLICY RECOMMENDATIONS

National Education Association (NEA) Committees on Telecommunications and Educational Technology issued reports in 1992 which contained policy recommendations in the area of distance education. The Special Committee on Telecommunications made the following recommendations dealing with distance education:

1. states should develop specific policies for licensing teachers in distance education;
2. standards and policies regarding distance learning facilitators should be developed by districts and local collective bargaining units;
3. compensated training should be provided in the use of equipment, development of materials, and appropriate instructional strategies;
4. those teaching classes over interactive networks be given sufficient time to prepare for their classes;
5. teleteachers should be held harmless from any and all actions, suits, claims, or other forms of liability which arise from their involvement in a telecommunications network (Employers of teleteachers should be obligated to provide a legal defense for them in the event that they are named in a negligence action);
6. the evaluation of teleteachers should be done openly and meet the requirements of local collective bargaining or evaluation policy; and
7. every classroom should have access to the resources necessary to make full use of telecommunications, including a VCR and a video display monitor.

The companion, Special Committee on Educational Technology's report recommends that "the association and its affiliates should be involved in the planning, implementation, and evaluation of long distance learning proposals and programs to provide the highest quality learning experience." The report which considers distance learning as "a supplement, and an enrichment" suggests that technology offers some contrasting pedagogical choices and acknowledges that distance education can broaden classroom experiences. The report opines that it contains some "down side" potentials including: impersonal student-teacher interactions, inflexible schedules, boredom, and a lack of attention to unique student needs at distance locations.

C. EDUCATIONAL RESEARCH ON FACULTY ROLES

Advantages and Disadvantages

In 1992, the American Journal of Distance Education (Vol. 6 No 3) devoted an entire volume to the faculty perspective of teaching in distance education. According to the guest editors, they solicited articles which would present evidence of what is common to teachers "separated in space and/or time" from their learners. Articles explore, across a variety of institutional settings and academic disciplines, correspondence, video-based "telecourses," personal computer-mediated communications, teleconferencing, audioconferencing, one-way video and two-way audio and audiographics modes of delivery. The editors suggest that to this date most scholarly articles have been:

1. on the technologies used in distance education;
2. their application to conventional classroom teaching; and
3. the acceptance of the media by the students involved in the learning process.

The editors state their impression that there is abundant literature targeted to student groups and focused on distance education theory, course design, and the implementation of specific forms of distance education (including a focus on learner outcomes, learner characteristics, and learner attitudes). They do suggest a deficiency of comprehensive treatment of the changed role of the instructor involved in distance education.

In reviewing these papers, the editors conclude that "teaching students through distance ed methods is not merely adapting traditional classroom approaches, techniques, or styles to situations where communication with the student is via written lessons or computer exchange in asynchronous time formats. There is more to distance ed instruction than putting a camera or microphone in front of instructors and allowing them to replicate their traditional classroom teaching style or technique. True distance education implies something much more than a simple modification of what is done in the "live" classroom."

They also find that some authors have argued that the disadvantages of the required changes in faculty roles in distance teaching outweigh the advantages. Proponents have argued the advantages suggesting that "as tutors and consultants have largely been relieved from the task of conveying course material, they are able to devote themselves to a considerable degree to more demanding tasks, such as: aiding motivation; providing individual support; structuring course content for students; identifying problems; and establishing connections." (Peters, 1983)

The editorial observes that the submissions spoke "of a fundamentally altered role for the teacher who instructs at a distance" and a "having to let go of old, deeply ingrained notions of what the teacher's role in the learning process should be." They clearly believe that fundamental changes in teaching style, technique, and motivation must take place to make these new "classrooms" function effectively.

Faculty Resistance

An extensive article reviewing the literature on faculty roles in distance education by Dillon and Walsh (1992) entitled "Faculty: the neglected resource in distance education" found studies citing evidence for faculty resistance to instructional technology as a primary barrier to the continued growth of distance education programs and support for the conclusion that "attitudinal issues -- how people perceive and react to these technologies -- are far more important now than structural and technical obstacles in influencing the use of technology in higher education."

Rogers (1983) advised that if an innovation is to be adopted and diffused throughout a system it needs to have a certain set of characteristics including:

1. perception as better than its predecessor (relative advantage)
2. relatively simple and easy to understand (complexity)
3. testability prior to commitment (trialability)
4. observation by adopters prior to adoption (observability)

Lindquist (1978) opined that innovation must fit the local scene and be perceived as belonging to those whom it affects. This article suggests five components as necessary for successful change:

1) ownership by those whom it affects;
2) linkage to both informational and interpersonal resources;
3) leadership that is guiding and initiating rather than authoritarian, influential, and dogmatic;
4) an actively open environment that seeks out and listens to disparate opinions; and
5) material and psychic rewards that foster self esteem and personal development.

Dillon and Walsh (1992) summarize the primary benefits of distance education cited by faculty to be:

1) ability to reach new populations of learners;
2) the opportunity to work with better prepared and more motivated students;
3) flexibility in work schedule; and
4) pedagogical advantages such as the necessity for more efficient organization and ability to use a broader range of media-based resources.

They also summarize the barriers cited by faculty including:

1) additional workload;
2) lack of time;
3) reduced student interaction;
4) less spontaneity; and
5) technical and administrative problems (poor audio quality, distribution of course materials).

Institutional Priorities: Beyond Budget

Dillon and Walsh (1992) found that several studies pointed out that enrollment-driven budgeting policies are the primary barrier to the integration of technology because these policies cannot cover the substantial up-front investments required for equipment and course development. As well, attention must be paid to the institutional policies concerning the responsibility for the provision of support services. Faculty identified the following as support concerns:

1. monetary compensation (important);
2. teaching assistants (important);
3. instructional design and technical support (important); and
4. training (important);
5. assistance with the preparation of course materials (particularly important);
6. clerical services (particularly important);
7. coordination of communication with distant students (particularly important);
8. marketing services (particularly important); and
9. distribution of materials (particularly important).

The Dillon and Walsh article is critical of the fact that few efforts in training faculty have gone beyond the operation of the technology and fail to deal with the important issue of how to teach at a distance. Three fundamental considerations include: the skills required for distance teaching; the teaching styles of distance teachers; and the training needs of faculty.

Personalized Student-Teacher Contact

In a 1990 study (Hackman and Walker) of distance student satisfaction identified the following as important:

1. individualized feedback in class;
2. expressive vocal quality;
3. addressing students by name;
4. inviting student contact;
5. praise; and
6. smiling.

This study showed that distance student satisfaction increased as personalized contact with the teacher increased. This study appears to add credence to both the current regulatory provisions governing credit transferable telecourse work in the community colleges and the conclusions of a study by the American Association of Higher Education, Education Commission of the States, and Johnson Foundation which was published in their "Seven Principles for Good Practice in Undergraduate Education" summarized below.

Seven Principles for Good Practice in Undergraduate Education

1. Good practice encourages student-faculty contact.
   Frequent student-faculty contact in and out of classes is the most important factor in student motivation and involvement. Faculty concern helps students get through rough times and keep on working. Knowing a few faculty members well enhances students' intellectual commitment and encourages them to think about their own values and future plans.

2. Good practice encourages cooperation among students.
   Learning is enhanced when it is more like a team effort than a solo race. Good learning, like good work, is collaborative and social not competitive and isolated. Working with others often increases involvement in learning. Sharing one's own ideas and responding to others reactions improves thinking and deepens understanding.

3. Encourages active learning.
4. Gives prompt feedback.
5. Emphasizes time on task.
6. Communicates high expectations.
7. Respects diverse talents and ways of learning.

Effective Technical and Instructor Competencies

Dillon and Walsh (1992) also found a 1987 Univ. of Victoria study of students in satellite courses that identified technical considerations and instructor competencies which contributed to success including:

1. good voice quality;
2. animated body language;
3. use of eye contact;
4. knowledge of and interest in the material;
5. clear presentation;
6. technical competence;
7. enthusiasm;
8. interest in the student;
9. ability to personalize the experience; and
10. ability to modify the pacing according to student needs.

Dillon and Walsh report on a 1991 study of a Canadian audio-based distance ed program showed that instructor competencies which could encourage an interactive experience included:

1. using silence to encourage reflection;
2. personalizing interaction;
3. developing a prearranged response sequence;
4. using directed questioning techniques;
5. providing frequent positive feedback;
6. clarifying and summarizing student responses to confirm understanding; and
7. carefully planning the activities.

Other Important Factors (Dillon and Walsh, 1992)

Several studies showed the importance of personalized, empathic rapport with students in both verbal and printed communications.

Ownership proved to be very important and one study showed that the level of faculty control as the greatest predictor of willingness to teach at a distance.

Another study showed that there are a number of areas which can conflict with traditional academic values:

1. dependence upon collaboration with instructional designers and technicians;
2. disruption in traditional faculty authority roles, which forces faculty to deal with matters outside their particular expertise;
3. removing faculty from control of their intellectual property; and
4. concern about the threat to faculty jobs.

Finally, Dillon and Walsh's review suggests that California's AB 1725 reforms and consequent improvements in the institutional environment for teaching and decision making as well as the continuing state support for professional development could certainly play a important role in determining if the expansion of distance education is to succeed in California community colleges. There is no reason in that California's community colleges should be charged with the statement that one study asserted: "higher education too frequently offers...teachers little or no incentives to change. Supposedly committed to the highest moral and intellectual values, higher education is too often the province of triviality and irrelevance."

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